

IN THE CLAIMS:

Please CANCEL claims 49 and 50, AMEND claims 34-39, 41-46, 48 and 51-71 and ADD new claims 72 and 73 as follows.

1-33. (Cancelled)

34. (Currently Amended) A method, comprising:

a) receiving a parameter defining allowed access slots of a physically existing random access channel from a base transceiver station of a mobile communications network by at least one mobile station of a plurality of mobile stations of the mobile communications network ~~a parameter defining allowed access slots of a physically existing random access channel~~;

b) determining, at said at least one mobile station, said allowed access slots of the physically existing random access channel based on said parameter; and

c) using, at said at least one mobile station, at least one of said determined allowed access slots of the physically existing random access channel ~~for initiating~~ to initiate a random access operation ~~to~~ with said base transceiver station.

35. (Currently Amended) The method according to claim 34, further comprising:

~~transmitting~~ receiving said parameter via a broadcast channel.

36. (Currently Amended) A method, comprising:
receiving a parameter defining allowed access slots of a physically existing
random access channel from a base transceiver station of a mobile communications
network by at least one mobile station of a plurality of mobile stations of the mobile
communications network;
determining, at said at least one mobile station, said allowed access slots of the
physically existing random access channel based on said parameter;
using, at said at least one mobile station, at least one of said determined allowed
access slots of the physically existing random access channel to initiate a random access
operation with said base transceiver station; and
receiving said parameter via a broadcast channel~~The method according to claim~~
35, wherein said broadcast channel is ~~the~~a B~~broadcast C~~channel of a W~~wideband C~~ode
D~~ivision M~~ultiple Access system.

37. (Currently Amended) A method, comprising:
receiving a parameter defining allowed access slots of a physically existing
random access channel from a base transceiver station of a mobile communications
network by at least one mobile station of a plurality of mobile stations of the mobile
communications network;
determining, at said at least one mobile station, said allowed access slots of the
physically existing random access channel based on said parameter;

using, at said at least one mobile station, at least one of said determined allowed access slots of the physically existing random access channel to initiate a random access operation with said base transceiver station;

receiving said parameter via a broadcast channel; and~~The method according to claim 35, comprising~~

initiating said random access operation via ~~the~~a Pphysical ~~R~~random ~~A~~access ~~E~~channel uplink channel and ~~the~~an ~~A~~acquisition ~~I~~indication ~~E~~channel downlink channel of the ~~W~~wideband ~~E~~code ~~D~~division ~~M~~multiple ~~A~~access system.

38. (Currently Amended) The method according to claim 34, wherein said parameter defines a subset of available access slots of said mobile communications network.

39. (Currently Amended) The method according to claim 38, further comprising:

determining said subset by another parameter transmitted from said base transceiver station to said mobile station.

40. (Previously Presented) The method according to claim 39, wherein said other parameter is a timing parameter defining a transmission timing of an uplink access slot.

41. (Currently Amended) The method according to claim 39, further comprising:

~~transmitting~~ receiving said other parameter via a broadcast channel.

42. (Currently Amended) The method according to claim 39, further comprising:

changing ~~the~~ a bit number of said parameter in dependence on said other parameter.

43. (Currently Amended) A method, comprising:

receiving a parameter defining allowed access slots of a physically existing random access channel from a base transceiver station of a mobile communications network by at least one mobile station of a plurality of mobile stations of the mobile communications network;

determining, at said at least one mobile station, said allowed access slots of the physically existing random access channel based on said parameter;

using, at said at least one mobile station, at least one of said determined allowed access slots of the physically existing random access channel to initiate a random access operation with said base transceiver station, wherein said parameter defines a subset of available access slots of said mobile communications network;

determining said subset by another parameter transmitted from said base transceiver station to said mobile station;
changing a bit number of said parameter in dependence on said other parameter;
and~~The method according to claim 42, comprising~~
disabling a transmission of a preamble signature or an acquisition indication in dependence of ~~the~~on a value of said parameter.

44. (Currently Amended) A method, comprising:
receiving a parameter defining allowed access slots of a physically existing random access channel from a base transceiver station of a mobile communications network by at least one mobile station of a plurality of mobile stations of the mobile communications network;
determining, at said at least one mobile station, said allowed access slots of the physically existing random access channel based on said parameter;
using, at said at least one mobile station, at least one of said determined allowed access slots of the physically existing random access channel to initiate a random access operation with said base transceiver station, wherein said parameter defines a subset of available access slots of said mobile communications network;
determining said subset by another parameter transmitted from said base transceiver station to said mobile station;

changing a bit number of said parameter in dependence on said other parameter;

~~and The method according to claim 42, comprising~~

calculating an index of an allowed uplink access slot on the basis of ~~the~~a value of said parameter and a frame number of a frame used for transmitting an uplink access slot.

45. (Currently Amended) A method, comprising:

a)-receiving a parameter defining allowed access slots of a physically existing random access channel from a base transceiver station of a mobile communications network by at least one mobile station of a plurality of mobile stations of the mobile communications network ~~a parameter defining allowed access slots of a physically existing random access channel;~~

b)-determining, at said at least one mobile station, said allowed access slots of the physically existing random access channel based on said parameter; and

e)-using, at said at least one mobile station, at least one of said determined allowed access slots of the physically existing random access channel ~~for performing~~to perform a random access operation ~~to~~with said base transceiver station,

wherein said parameter defines a subset of available access slots of said mobile communications network,

wherein said subset is determined by another parameter transmitted from said base transceiver station to said at least one mobile station,

wherein ~~the~~ a bit number of said parameter is changed in dependence on said other parameter,

wherein an index of an allowed uplink access slot is calculated on the basis of the value of said parameter and a frame number of a frame used for transmitting an uplink access slot,

wherein said index is calculated by using the equation

$$i = 3 \cdot N + (F \text{ modulo } 3)$$

where $0 \leq N \leq 2$,

wherein F and N are integers ~~numbers~~, and F denotes said frame number, and

wherein only access slots having indices within the range 0 to 7 are valid.

46. (Currently Amended) A method, comprising:

a) ~~receiving a parameter defining allowed access slots of a physically existing random access channel~~ from a base transceiver station of a mobile communications network by at least one mobile station of a plurality of mobile stations of the mobile communications network ~~a parameter defining allowed access slots of a physically existing random access channel~~;

b) ~~determining, at said at least one mobile station, said allowed access slots of the physically existing random access channel based on said parameter; and~~

e) using, at said at least one mobile station, at least one of said determined allowed access slots of the physically existing random access channel ~~for performing~~to perform a random access operation ~~to~~with said base transceiver station

wherein said parameter defines a subset of available access slots of said mobile communications network,

wherein said subset is determined by another parameter transmitted from said base transceiver station to said mobile station,

wherein ~~the~~a bit number of said parameter is changed in dependence on said other parameter,

wherein an index of an allowed uplink access slot is calculated on the basis of the value of said parameter and a frame number of a frame used for transmitting an uplink access slot,

wherein said index is calculated by using the equation

$$i = 4 \cdot N + (\Gamma \text{ modulo } 4)$$

where $0 \leq N \leq 3$,

wherein Γ and N are integers ~~numbers~~, and Γ denotes a frame number indicating two consecutive frame numbers of said frame used ~~for transmitting~~to transmit an uplink access slot, and wherein only access slots having indices within the range 0 to 14 are valid.

47. (Previously Presented) The method according to claim 45, wherein said parameter determines an offset to be added to said calculated index.

48. (Currently Amended) The method according to 34, further comprising:
determining an index of an allowed uplink access slot on the basis of ~~the~~a value of said parameter irrespective of a frame number of a frame used ~~for transmitting to transmit~~
an uplink access slot.

49-50. (Cancelled)

51. (Currently Amended) A method, comprising:
receiving a parameter defining allowed access slots of a physically existing
random access channel from a base transceiver station of a mobile communications
network by at least one mobile station of a plurality of mobile stations of the mobile
communications network;
determining, at said at least one mobile station, said allowed access slots of the
physically existing random access channel based on said parameter; and
using, at said at least one mobile station, at least one of said determined allowed
access slots of the physically existing random access channel to initiate a random access
operation with said base transceiver station,

~~The method according to claim 34,~~ wherein bit values of a binary expression of said parameter ~~determines~~determine a combination of calculated indices obtained for other values of said parameter, said other values corresponding to ~~the~~ binary weights of said binary expression.

52. (Currently Amended) A system, comprising:

a) a base transceiver station ~~arranged for transmitting~~configured to transmit a parameter defining allowed access slots of a physically existing random access channel; and

b) a plurality of mobile stations ~~arranged for receiving~~configured to receive said parameter, ~~for determining~~ to determine said allowed access slots of the physically existing random access channel based on said parameter, and ~~for using~~to use at least one of said determined allowed access slots of the physically existing random access channel ~~for initiating~~to initiate a random access operation ~~to~~with said base transceiver station.

53. (Currently Amended) A system, comprising:

a base transceiver station configured to transmit a parameter defining allowed access slots of a physically existing random access channel; and

a plurality of mobile stations configured to receive said parameter to determine said allowed access slots of the physically existing random access channel based on said parameter, and to use at least one of said determined allowed access slots of the

physically existing random access channel to initiate a random access operation with said base transceiver station,

~~The system according to claim 52,~~ wherein said ~~network element~~base transceiver station is a ~~W~~wideband ~~C~~ode ~~D~~ivision ~~M~~ultiple ~~A~~ccess base transceiver station and said plurality of mobile stations ~~is a~~re ~~W~~wideband ~~C~~ode ~~D~~ivision ~~M~~ultiple ~~A~~ccess mobile stations.

54. (Currently Amended) ~~An apparatus-network element,~~ comprising:

a) ~~setting means for setting a parameter defining allowed access slots of a physically existing random access channel, wherein~~via which at least one mobile station initiates a random access operation to the apparatus based on the allowed access slots of the physically existing random access channel ~~a random access operation to the network element to be initiated;~~ and

b) ~~transmitting means for transmitting said parameter to said plurality of mobile stations.~~

55. (Currently Amended) An apparatus, comprising:

setting means for setting a parameter defining allowed access slots of a physically existing random access channel, wherein at least one mobile station initiates a random access operation to the apparatus based on the allowed access slots of the physically existing random access channel; and

transmitting means for transmitting said parameter to said plurality of mobile stations,

~~The network element according to claim 54, wherein said network element~~apparatus is a ~~W~~wideband ~~C~~ode ~~D~~ivision ~~M~~ultiple ~~A~~ccess base transceiver station.

56. (Currently Amended) The ~~network element~~apparatus according to claim 54, wherein said transmitting means ~~is arranged to transmit~~ said parameter via a broadcast channel.

57. (Currently Amended) The ~~network element~~apparatus according to claim 54, wherein said setting means ~~is arranged to set~~ said parameter in dependence on a timing parameter value defining a transmission timing of an uplink access slot in said random access operation.

58. (Currently Amended) ~~An apparatus~~mobile station, comprising:
a) ~~a receiving unit~~receiver configured to receive from ~~said~~a network element a parameter defining allowed access slots of a physically existing random access channel for ~~said~~a random access operation;

b) a ~~determining unit~~determiner configured to determine said allowed access slots of the physically existing random access channel based on said parameter received from said network element; and

e) a ~~transmitting unit~~transmitter configured to initiate transmission of a random access message to said network element using at least one of said determined allowed access slots of the physically existing random access channel.

59. (Currently Amended) The ~~mobile station~~apparatus according to claim 58, wherein said ~~receiving unit~~receiver is ~~arranged~~configured to receive said parameter via a broadcast channel.

60. (Currently Amended) The ~~mobile station~~apparatus according to claim 59, wherein said ~~determining unit~~determiner is ~~arranged~~configured to determine said allowed access slots of the physically existing random access channel on the basis of said received parameter and a timing parameter received via said broadcast channel.

61. (Currently Amended) The ~~mobile station~~apparatus according to claim 58, wherein said ~~determining unit~~determiner is arranged to calculate an index of an allowed uplink access slot on the basis of the value of said received parameter and a frame number of a frame used ~~for transmitting to~~transmit an uplink access slot.

62. (Currently Amended) The ~~mobile station~~apparatus according to claim 58, wherein said ~~determining unit~~determiner is ~~arranged~~configured to determine an index of an allowed uplink access slot on the basis of the value of said parameter irrespective of a frame number of a frame used ~~for transmitting to~~transmit an uplink access slot.

63. (Currently Amended) The ~~mobile station~~apparatus according to claim 58, ~~wherein~~further comprising:

~~a selection unit is provided for~~selector configured to randomly selectingselect an uplink access slot to be used for transmitting a preamble of said random access message from the allowed access slots of the physically existing random access channel determined by said determining unit~~determiner an uplink access slot to be used for transmitting a preamble of said random access message.~~

64. (Currently Amended) An apparatus, comprising:
a receiver configured to receive from a network element a parameter defining allowed access slots of a physically existing random access channel for a random access operation;

a determiner configured to determine said allowed access slots of the physically existing random access channel based on said parameter received from said network element;

a transmitter configured to initiate transmission of a random access message to said network element using at least one of said determined allowed access slots of the physically existing random access channel; and

a selector configured to randomly select an uplink access slot to be used for transmitting a preamble of said random access message from the allowed access slots of the physically existing random access channel determined by said determiner,

~~The mobile station according to claim 63,~~ wherein consecutive preambles are transmitted a predetermined number of access slots apart.

65. (Currently Amended) The ~~mobile station~~apparatus according to claim 64, wherein said predetermined number depends on a timing parameter received by said ~~receiving unit~~receiver.

66. (Currently Amended) The ~~mobile station~~apparatus according to claim 64, wherein said ~~selection unit~~selector is ~~arranged~~configured to perform said random selection any time a preamble needs to be transmitted.

67. (Currently Amended) A method, comprising:
a) receiving a parameter defining allowed access slots of a physically existing random access channel for a random access operation in a mobile communications network;

~~b)~~ determining said allowed access slots of the physically existing random access channel based on said parameter; and

~~e)~~ initiating transmission of a random access message using at least one of said determined allowed access slots of the physically existing random access channel.

68. (Currently Amended) A method, comprising:

~~a)~~ receiving information about a set of available uplink access slots of a physically existing random access channel in a mobile communications network;

~~b)~~ deriving available uplink access slots, in a next full access slot set, for the set of available uplink access slots; and

~~e)~~ randomly selecting one access slot among the available uplink access slots ~~for initiating to initiate~~ a random access procedure.

69. (Currently Amended) A method, comprising:

~~a)~~ receiving a set of available ~~R~~random ~~A~~access ~~C~~channel sub-channels in a mobile communications network, a ~~R~~random ~~A~~access ~~C~~channel sub-channel defining a sub-set of a total set of uplink access slots of a physically existing random access channel;

~~b)~~ deriving available uplink access slots, in a next full access slot set, for the set of available ~~R~~random ~~A~~access ~~C~~channel sub-channels; and

e) randomly selecting one access slot among the available uplink access slots ~~for~~ initiating to initiate a random access procedure.

70. (Currently Amended) A method, comprising:

a) receiving an access parameter message sent on a broadcast channel in a mobile communications network, the access parameter message defining allowed transmission slots of a physically existing random access channel in which random access channel transmissions are limited to occur, wherein the allowed transmission slots are dictated by slot offset and slot duration parameters;

b) calculating an allowed transmission slot based on the slot offset and slot duration parameters; and

e) initiating transmission of a random access message using the allowed transmission slot.

71. (Currently Amended) An apparatus, comprising:

a) receiving means for receiving from a network element a parameter defining allowed access slots of a physically existing random access channel for a random access operation;

b) determining means for determining said allowed access slots of the physically existing random access channel based on said parameter received from said network element; and

e) transmitting means for initiating transmission of a random access message to said network element using at least one of said determined allowed access slots of the physically existing random access channel.

72. (New) The apparatus according to claim 54, further comprising determining means for determining an allowed downlink slot by adding a predetermined value to an index of a received uplink slot.

73. (New) The apparatus according to claim 72, further comprising:
selecting means for selecting said predetermined value in accordance with a timing parameter defining a transmission timing of said uplink slot.